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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/513,015	02/25/2000	Robert J. Block	83000.1135;P4722/ARG	7018

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EXAMINER

PRIETO, BEATRIZ

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/513,015

Applicant(s)

BLOCK ET AL.

Examiner

Prieto B

Art Unit

2142

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,8 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,8 and 17-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____



DETAILED ACTION

1. This communication is in response to amendment filed 06/08/04, claims 6, and 14-16 have been cancelled (9-13 previously cancelled), claims 1, 5 and 25 have been amended and claims 26-28 have been added. Claims 1-5, 7-8 and 17-28 remain pending and have been examined.
2. Acknowledgement is made to applicant's claimed the benefit of an earlier filing data under 35 U.S.C §120 based on Application No. 09/063,335 abandoned as of 07/09/01.
3. Claim 5 recites the limitation "wherein said second determining step comprises". There is insufficient antecedent basis for this limitation in the claim. Specifically, "a first determination" nor "a second determination" has been previously recited, nor "steps". Correction is required.
4. Added claim 27 is objected as being a negative limitation. According to MPEP 2173.05(i) the claim must comply with the requirements of 35 U.S.C. 112, second paragraph. The exclusion needs to be particularly pointed out in the invention's disclosure. In re Schechter, 205 F.2d 185, 98 USPQ 144 (CCPA 1953). Any negative limitation or exclusionary proviso must have basis in the original disclosure. The mere absence of a positive recitation is not basis of an exclusion. Applicant is urged to point out supportive portion for added limitation.
5. Claim terminology has been given the broadest reasonable interpretation in light of the specification (see MPEP 2111). In this case, claimed term session means a representation of services (p. 22, lines 5-11), a service is a program that provides some function to the user (p. 24, lines 9-12) or a process that provides output data and responds to user request and input (p. 19, lines 3-4), services makeup a session (p. 22, lines 15-16), wherein a service may be a proxy (p. 19, lines 17-21); claimed term token is an identifier, an address or serial number (p.22, lines 5-11); claimed term "self-organizing" means the exchange of messages between servers enabling servers to be aware of the servers available in the cluster or of one another (p. 13, lines 1-8).
6. Quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action may be found in previous office action.

7. Claims 1-5, 7-8 and 17-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over NARENDRAN et. al U.S. Patent No. 6,070,191 (hereafter Narendran) in view of SWE: Toward a scalable WWW server on multi-computers, Andersen et. al., Dept. of Computer Science, Univ. of California, 1996, pages 1-7 (Andersen hereafter).

Regarding claim 1, Narendran teaches substantial features of the invention as claimed, including a client (col 3/lines 39-51), a first server (14) (col 3/lines 60-61) and a plurality of servers ($S_1 \dots S_N$) (col 3/lines 57-62, col 4/lines 17-19);

initiating a connection between a client unit and a first server (col 10/lines 41-44 or col 3/lines 63-64);

determining at said first server a location of a service ("session") on one of said plurality of servers (col 4/lines 44-55, col 6/lines 18-21 or col 15/lines 14-17); and

redirecting said client unit via said first server to a second server having said service ("session") (col 18/lines 38-42, 54-57, col 4/lines 19-21 or col 15/lines 14-25);

exchanging information between a first server and a plurality of servers (col 15/lines 35- col 16/line 5); wherein said first and second servers can each provide said plurality of services (Narendran: abstract) and wherein said plurality of services comprise information (called "state maintenances") for a user of said client unit (Narendran: col 3/lines 49-56);

each of said plurality of sessions comprises a plurality of services requested by said client unit (Narendran: col 3/line 46-56, col 4/lines 49-52, 64-67); however Narendran does not explicit teach where the plurality of server exchange information between themselves;

Andersen teaches a plurality of servers exchanging information (page 3, left column paragraphs 2-3 and section 3.2 on page 3); wherein said first and second servers can each provide said plurality of services (Andersen: see sections 3.1- 3.2);

determining a most recent accessed session of a plurality of sessions on said plurality of servers, determining the location (e.g. IP address) of said most recently access session on one of said plurality of servers and redirecting client request to a second server of said plurality of servers having said most recently accessed session (Andersen: page 1, right column first paragraph);

each session of said plurality of sessions comprise a plurality of services requested by said client (Andersen: page 1, right column 2-3rd paragraph).

It would have been obvious to one ordinary skilled in the art at the time the invention was made given the suggestion of Narendran for having a server redirect a client to an alternate server having a request server in event of failure by configuring redirecting server with the knowledge as to where the alternate servers having request service are located, to also configure all servers having this adaptive redirecting/scheduling capability as taught by Andersen. Server configured with information exchange capabilities including periodically broadcasting network configuration information, awareness of the services present (i.e. leave or join the resource pool) in the network as well as their respective capabilities and current load. One ordinary skilled would be motivate to enhance Narendran's system with the scalability, fault tolerant and load balancing implementations of the prior art also utilizing server-client redirection mechanisms.

Regarding claim 2, wherein said initiating comprises: said client unit broadcasting a message to a domain of server comprising said plurality of servers (Narendran: col 4/lines 10-12), and said first server responding to said message (Narendran: col 14/lines 48-51 or 15/lines 14-25).

Regarding claim 3, said initiating is in response to a prior server failing (col 12/lines 12-65).

Regarding claim 4, said service ("session") is associated with an identifier ("token") (Narendran: col 4/lines 5-16).

Regarding claim 5, said determining comprises said first server sending a message to said plurality of servers, said message comprising said token (Narendran: col 6/lines 19-26 and col 15/lines 35-col 16/line 5); and said plurality of servers responding to said first server with service information associated with said identifier (Narendran: col 6/lines 19-26 and col 15/lines 35-col 16/line 5).

Regarding claim 7, securing messages between said client unit and said plurality of servers (Andersen: page 4, left column section 3.1, item 1).

Regarding claim 8, wherein said securing is performed with a keyed hash signature.

Official Notice (see MPEP § 2144.03 *Reliance on "Well Known" Prior Art*) is taken that keyed hash signature was old and well known in the Data Processing art. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include this feature because it is a common authentication scheme which employs authentication tokens to

improved security system against eavesdropping, dictionary attacks, and intrusion into stored password lists.

Regarding claim 17, said information exchanged between said plurality of servers comprises a description of an information regarding devices or the presence of devices on the network also called network configuration (i.e. network topology) of said plurality of servers (Narendran: col 6/lines 19-21 or Andresen: page 1, right column, 1st paragraph and page 3, left column 3rd paragraph).

Regarding claim 18, updating status in said network topology on a relationship between a connectivity of said client unit and said second server (Andresen: page 2, right column 2nd paragraph, page 3, left column, 3rd paragraph).

Regarding claim 19, this limitation is substantially the same as redirecting limitation on claim 1, same rationale of rejection is applicable.

Regarding claims 20 and 23, wherein said client unit comprises a ("thin client unit" and "thin client session" and a "stateless device") i.e. a computing device (Narendran: col 3/lines 49-56).

Regarding claim 21, wherein said session comprises a service ("thin client session") that services client's request (Narendran: abstract).

Regarding claim 22, maintaining said service "session" persistently by said plurality of servers, i.e. stored or cached (Narendran: col 4/lines 26-29).

Regarding claim 24, said determining said location at said first server of said session on one of said plurality of servers comprises receiving a message from said second server of an availability of said second server for having said session (Narendran: directory of services see col 15/lines 61-col 16/line 5).

Regarding claim 25, wherein said token can identify a plurality of sessions (Narendran: col 4/line 10-15).

Regarding claim 26, plurality of server communicate with each other to support awareness of the server available in the group or cluster (Andersen: sections 3.1-3.2).

Regarding claim 27, plurality of server are distributed (Andersen: section 3.1).

8. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Andersen in view of DEAN et. al. U.S. Patent No. 6,023,762 (Dean hereafter).

Regarding claim 28, Andersen discloses substantial features of the invention as claimed;

exchange information (e.g. load and/or availability) between a pluralities of servers via a process (called self-discovery) enabling the awareness of each other in the resource pool of server (Andersen: section 3.1-3.2);

determining at a first server of a plurality of server, a most recently accessed session of a plurality of session provided by a plurality of server and redirecting a client request via said first server to a second server of said plurality of server having determined most recently accessed session (Andersen: page 1, right column first paragraph); although Andersen teaches establishing a connection between a client unit and any one of said plurality of servers for sending a request and receiving a response thereto including determining a most recently accessed session and redirecting said client unit to said most recently accessed session, Andersen does not teach relating, correlating or mapping a plurality of services with a token associated with a client's unit.

Dean teaches a system/method related to networked computer systems as shown in Fig. 1, including a client unit (108) sending over an established connection a request for a plurality of services ("sessions") on a plurality of services providers (106) ("servers") (col 3/lines 37-43, col 1/lines 59-67) by inserting a ("token") smart card (110) in said client unit (col 3/lines 45-55, col 7/lines 1-21, 62-67);

directing said client unit at a first server (107 of Fig. 2), said first server including a data storage means for identifying a plurality of session types associated with said token which the user of the client unit has access to (col 2/lines 8-12, 24-42, col 5/lines 40-47) using stored information on table 401 (col 8/lines 30-32, 42-50, 58-61, col 9/lines 1-10, 47-61);

It would have been obvious at the time the invention was made given the suggestion of Andersen for making services available in a multiple server computing environment efficiently including disclosed distributing techniques for redirecting client's request adaptively to the changes in the network configuration including the distribution of the scheduling means to overcome the disadvantages of prior art system to consider Dean's teachings for distributing

client's request to multiple servers in a secure manner. Motivation to combine the teachings of Dean with Andersen will be complement Andersen first/redirecting server configured with proxy functionalities configure with either redirection or forwarding techniques, with the proxy functionalities of the redirecting agent in the Dean system both making services available in a multiple server computing environment. One would be motivated to implement these components for accessing a plurality of sessions on a plurality of servers for accessing corporate wide area network or Intranet services behind a proxy exemplified by Andersen as a firewall to protect said plurality of sessions on said plurality of server from unauthorized users whose authentication is augmented by smart card technology.

Response to arguments

9. Regarding claims 1, 5 and 25, it is argued instant invention is distinguishable over the prior art in that the present invention provides a plurality of servers in a grouped environment that are self-organizing, with no master component, and hence, no single point of failure.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., no single point of failure) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). This is not a suggestion that if this feature were incorporated in the claim language, provided there are explicitly disclosed in the specification, this will overcome the prior art of record.

10. Regarding claims 1, 5 and 25, it is argued that the redirection server of the prior art do not provide the "actual" service, i.e. the document requested by the client, because according to applicant the "client servers" of the present invention provide redirection service and the actual client services requested by the client.

In response to the above-mentioned argument, applicant's interpretation of the prior art and the invention has been considered. However, according to applicant's specification, the claimed term "service" is a program that provides some function to the user (p. 24, lines 9-12) or a process that provides output data and responds to a request and input (p. 19, lines 3-4), services makeup a session (p. 22, lines 15-16), wherein a service may be a proxy (p. 19, lines 17-21). Based on invention's definition of the term service, and its broadest reasonable interpretation in

light of the specification (see MPEP 2111), the redirection functions provided by 14-1 and 14-2 cannot be excluded as a “service”.

11. Regarding claims 1, 5, and 25, it is argued that present invention is distinguishable over the prior art in that, it provides a persistent session to a client that is highly available, wherein the thin client session persist over a long time and the session server contains the entire state of the user’s session, wherein a user can power-off the client and reconnect and pickup exactly where the use left off, down to the position of the cursor on the screen.

In response to the above-mentioned argument, applicant’s interpretation of the prior art and the invention has been considered. However, it is noted that the features upon which applicant relies (i.e., “a persistent session to a client that is highly available, wherein the thin client session persist over a long time and the session server contains the entire state of the user’s session, wherein a user can power-off the client and reconnect and pickup exactly where the use left off, down to the position of the cursor on the screen”) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It is noted that these features (upon which applicant relies on) contingent applicant points out where is this subject matter described in the specification, (to avoid future 112 issues), MAY overcome the prior art of record if incorporated in the base claim language.

12. Regarding claim 22, it is argued the prior art of record does not disclose or suggest, maintaining said session persistently by said plurality of server.

In response to the above-mentioned argument, it is noted that according to invention’s disclosure, the claimed term session means a representation of services (p. 22, lines 5-11), a service is a program that provides some function to the user (p. 24, lines 9-12) or a process that provides output data and responds to user request and input (p. 19, lines 3-4). Prior art teaches maintaining said service “session” persistently by said plurality of servers, i.e. stored or cached (Narendran: col 4/lines 26-29).

13. Regarding claim 23, it is argued the prior art of record does not disclose or suggest, wherein a client unit comprises a “stateless” device.

In response to the above-mentioned argument, the broadest reasonable interpretation to the claim language has been applied to the claimed term “stateless device”, this term has been

broadly interpreted as a device (see MPEP 2111). Narendran teaches a client configured for sending HTTP request over the network (col 2/lins 60-65) including any request for information obtainable from server in conventional manner (col 3/lines 46-56) in the form of an HTTP based request (col 4/lines 5-16).

14. Regarding claim 24 (but seems to be claim 25), it is argued the prior art of record does not disclose or suggest, as amended, where a token can identify a plurality of services ("sessions").

In response to the above-mentioned argument, it is noted that according to invention's specification, the claimed term "token" refers to an identifier, an address or serial number (p.22, lines 5-11). Claim reads where said token can identify a plurality of services "sessions". Narendran teaches wherein a identifier can identify a plurality of services, wherein an URL can identify a domain name identifying a server system or particular server location hosting the service (col 4/lines 5-16).

15. Applicant's arguments filed 06/08/04 have been fully considered but not rendered persuasive.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prieto, B. whose telephone number is (703) 305-0750. The Examiner can normally be reached on Monday-Friday from 6:00 to 3:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's Supervisor, Jack B. Harvey can be reached on (703) 305-9705. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800/4700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system, status information for published application may be obtained from either Private or Public PAIR, for unpublished application Private PAIR only (see <http://pair-direct.uspto.gov> or the Electronic Business Center at 866-217-9197 (toll-free).

Any response to this final action should be mailed to:

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Arlington VA, Sixth Floor (Receptionist).



B. Prieto
TC 2100
Patent Examiner
September 5, 2004